

Products

How to define the “Soldering” ?

Soldering is the process in which two metals are joined together by means of a third metal or alloy having a relatively low melting point.

Soft soldering is characterized by the value of the melting point of the third metal or alloy, which is below 450° C. The third metal or alloy used in the process is called solder.

In a soldering process, heat is applied to the parts to be joined, causing the solder to melt and be drawn into the joint by capillary action and to bond to the materials to be joined by wetting action. After the metal cools, the resulting joints are not as strong as the base metal, but have adequate strength, electrical conductivity, and water-tightness for many uses. Soldering is an ancient technique that has been used practically as long as humans have been making items out of metal.

How to define the “Edge Mount” ?

The Edge Mount provides the best overall board to connector electrical transition and launches the connector interface parallel to the PCB giving the lowest overall height profile.

PCB Mount: Connectors can be attached to the PCB Board through-hole mounting which can make the connector permanently attached.

Although nowadays, components were mechanically redesigned to have connectors directly soldered to the surface of the PCB, allowing much higher circuit densities.

How to define the “Surface Mounts Technology” ?

Surface mount technology (SMT) is a method for constructing electronic circuits in which the components (SMC, or Surface Mounted Components) are mounted directly onto the surface of printed circuit boards (PCBs). Electronic devices so made are called surface-mount devices or SMDs.

In the industry it has largely replaced the previous construction method of fitting components with wire leads into holes in the circuit board (also called through-hole technology). An SMT component is usually smaller than its leaded counterpart because it has no leads or smaller leads. It may have short pins or leads of various styles, flat contacts, a matrix of balls (BGAs), or terminations on the body of the component (passives).

How to define the “Adapter” ?

An adapter or adaptor is a device used to match the physical or electrical characteristics of two different things so that a connection may be made between them.

An adapter may be very simple, connecting one kind of plug to another kind of jack, but not changing what passes through.

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How to define the “Connector Type” ?

STRAIGHT:Used to connect cable to a jack mounted on equipment or attached to a cable. This is the most reliable and universally accepted type of connector style in terminating coaxial cable since it is cheaper but still offers best electrical performance.

RIGHT ANGLE:To avoid bending the cable, this kind of connector will be best fitted to ensure that it will reach tight space in which straight connectors is impossible to mate. Using this R/A type of connector will avoid having failures in the cable.

BULKHEAD:This is a different mounting style of connectors. Bulkhead connectors are designed to be inserted into a panel cutout from the front or the rear of the panel, and typically secured with a jam nut. For thick panels, this kind of mounting style of connector will be best choice. This kind of connector terminates the cable braid; feeds the cable insulator and center conductor through a panel, using a single mounting hole.

How to choose the right material for RF connectors?

Materials used in a connector affect both cost and performance.

Base metals include brass, beryllium copper, and stainless steel. Gold is the most common plating for the center pin because of its lower loss and corrosion-resistant interface. Silver or tin plating offer a lower-cost alternative.

Although MIL-C-39012 requires silver plating for the housing, silver tarnishes, creating an unattractive finish. Many users prefer tarnish-resistant nickel or nickel alloy finishes.

The MIM Manufacturing Process

Stage 1: Fine metal powders are combined with thermoplastic binders to form the injection moldable material.

Stage 2: The material is molded in an injection molding machine.

Stage 3: The green molded parts are processed to remove the binder and consolidate the metal powders.

Final Stage: The parts are through de-binding and sintering, then get the MIM Products.

MIM Advantages

As a relatively new technology, MIM brings about several benefits for metal forming.

1. Applicable for a wide range of materials
2. High degree of freedom for sizes and shape complexities
3. Shortened product development cycles, eliminating or minimizing secondary machining operations
4. Improved dimension precision
5. Higher density through minimizing porosity
6. Homogeneous distribution of chemical compositions
7. Improve tensile strength
8. Increase thermal conductivity
9. Competitive pricing

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What is MIM?

MIM is the acronym for Metal Injection Molding. It is an advanced metallurgical technology that integrates thermoplastic injection molding and conventional powder metallurgy technologies.

MIM is unique in that it realizes the mass production of complex three-dimensional objects with higher precision, greater design freedom and lower production cost.

MIM produces net or near-net shaped objects from a wide variety of metal materials. The significant cost reduction provides MIM an obvious competition edge, particularly for small-sized and complicated-shaped parts required for high performance, over traditional methods, such as

1. Investment Casting
2. Machining & Screw Machining
3. Die Casting when Steel rather than Aluminum or Zinc is desired
4. Conventional P.M. (press and sinter)

Applications

MIM allows for molding small, intricate configurations precisely and economically.

It is most suitable for volume production of complex and precise parts for industries of aerospace, automotive, medical, electronics, firearms, data storage, tool assembly and machine parts, and telecommunications.

The Future

This technology is currently being used by some RF coaxial connector makers for the production of RF connectors, particularly for telecommunication applications.

How to define the “Semi-Rigid Cables” ?

Semi-rigid cables offers the best shielding performance above any other cable assemblies.

This type of cable assembly unbent or shaped with no electrical degradation according to customers specification. To assure proper installation into the applicable equipment we make steps in forming or bending of the raw stock which is normally straight into desired shape of configuration.

Semi-rigid cable has an outer jacket (conductor) and a center conductor, separated by a Teflon-type dielectric. During the forming, the cable must be supported and the bend made preferably in a single motion to prevent deformation of the outer jacket.

How to terminate connector with RF assembly?

Terminating transmission lines with connectors requires various amounts of manual or automatic assembly.

Most connectors are attached using combinations of soldering, clamping, and crimping.

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What equipment do you have in product inspection?

1. 2.5 D Visual Measurement
2. Profile Projector
3. Micrometer
4. Microscope
5. Pin gage
6. Thread Gauge
7. Vernier Calipers
8. Thread Plug Gauge
9. Thread Ring Gauge

What kind of material you can machine for parts?

Metal: Brass, Stainless Steel, Aluminum, Titanium Alloy, Speed Steel, Alloy Steel and etc.
Plastics: PTFE, POM, PE, PEEK and other materials.

If you have any other specification, inquiry will be the most welcomed.

How about the range of outer and inner diameter is in machined parts?

Outer diameter : 0.03mm~200mm
Inner diameter : 0.15mm~50mm

What is the length range of your machined parts?

0.5mm~600mm is our capable length range, the length and tolerance usually depends on the outer and inner diameter of machined parts.

What is RoHS? Why do I need RoHS compliant products?

RoHS is the name for a directive passed by member nations of the European Union (EU) that restricts the use of certain substances in production of electrical and electronic equipment.

Defined as the Removal of Hazardous Substances, this directive (2002/95/EC) specifically restricts six substances Lead, Mercury, Cadmium, Hexavalent Chromium, PBB and PBDE. This directive is sometimes referred to as the EU "lead-free" legislation, but is in fact more far-reaching.

If you wish to produce or sell electrical and electronic equipment in the EU after June 2006, then the products must be compliant with this ROHS Directive. Products that are not RoHS-compliant by this time will not be allowed to be sold in the EU.

Does RoHS compliance mean lead-free?

RoHS compliance does not mean lead-free.

The EU Directive defines certain content limits of the six hazardous substances, which vary according to the product being made and the hazardous substance required for its manufacture.

For semiconductors, the main substance targeted for reduction is lead, which is found mainly in the external packaging.

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What is the difference between WEEE and RoHS?

WEEE stands for Waste of Electrical and Electronic Equipment and is also an EU law but it concerns the proper disposal of all electrical components after their useful life.

RoHS is an importation restriction into the EU and WEEE is concerned with proper disposal of the equipment.

Like RoHS, laws similar to the EU' s WEEE regulations are being evaluated in many countries.

This set of regulations primarily involves product documentation and literature on proper disposal procedures.

About RoHS2 and REACH Declarations?

We can provide our self-declaration (CoC) to ensure our products are fully complied with RoHS2 and REACH.

Do you offer UFL - 7cm / 1.13 - GSC cable assembly?

GSC can be terminated only with OD 0.81mm cable.

For 1.13 mm cable, HIROSE or I-Pex can be instead of Murata GSC connector.

What' s the difference between U.FL and GSC?

GSC is usually terminated with ultra-thin FEP coaxial cables with OD 0.8mm.

GSC and U.FL are made b Murata and Hirose respectively.

Currently it' s hard to offer a solution to make an interconnect together.